

**In the Claims:**

Claim 1. (Currently amended) A method of improving embryo implantation, the method comprising contacting an embryo with an effective amount of ~~heparanase~~mammalian heparanase and implanting the embryo in a receptive uterus.

Claim 2. (Currently amended) The method of claim 1, wherein said ~~heparanase~~mammalian heparanase is a mature heparanase.

Claim 3. (Currently amended) The method of claim 1, wherein said ~~heparanase~~mammalian heparanase is a pro-heparanase, cleavable into mature heparanase.

Claim 4. (Currently amended) The method of claim 1, wherein contacting the embryo with an effective amount of ~~heparanase~~mammalian heparanase is in vitro.

Claim 5. (Currently amended) The method of claim 1, wherein contacting the embryo with an effective amount of ~~heparanase~~mammalian heparanase is in utero.

Claim 6. (Cancelled)

Claim 7. (Currently amended) A method of improving embryo implantation, the method comprising contacting a receptive uterus with an effective amount of ~~heparanase~~mammalian heparanase and implanting the embryo in the receptive uterus.

Claim 8. (Currently amended) The method of claim 7, wherein said ~~heparanase~~mammalian heparanase is a mature heparanase.

Claim 9. (Currently amended) The method of claim 7, wherein said ~~heparanase~~mammalian heparanase is a pro-heparanase, cleavable into mature heparanase.

Claim 10. (Cancelled)

Claim 11. (Currently amended) The method of claim 7, wherein contacting the receptive uterus with the effective amount of ~~heparanase~~mammalian heparanase precedes implanting the embryo in the receptive uterus.

Claim 12. (Currently amended) The method of claim 7, wherein contacting the receptive uterus with the effective amount of ~~heparanase~~mammalian heparanase is concurrent to implanting the embryo in the receptive uterus.

Claim 13. (Currently amended) A method of improving embryo implantation, the method comprising contacting a receptive uterus with an effective amount of ~~heparanase~~mammalian heparanase, contacting an embryo with an effective amount of ~~heparanase~~mammalian heparanase and implanting the embryo in the receptive uterus.

Claim 14. (Currently amended) The method of claim 13, wherein said ~~heparanase~~mammalian heparanase is a mature heparanase.

Claim 15. (Currently amended) The method of claim 13, wherein said ~~heparanase~~mammalian heparanase is a pro-heparanase, cleavable into mature heparanase.

Claim 16. (Currently amended) The method of claim 13, wherein contacting the embryo with an effective amount of ~~heparanase~~mammalian heparanase is in vitro.

Claim 17. (Currently amended) The method of claim 13, wherein

contacting the embryo with an effective amount of ~~heparanase~~mammalian heparanase is in utero.

Claim 18. (Cancelled)

Claim 19. (Currently amended) The method of claim 13, wherein contacting the receptive uterus with the effective amount of ~~heparanase~~mammalian heparanase precedes implanting the embryo in the receptive uterus.

Claim 20. (Currently amended) The method of claim 13, wherein contacting the receptive uterus with the effective amount of ~~heparanase~~mammalian heparanase is concurrent to implanting the embryo in the receptive uterus.

Claim 21. (Currently amended) A method of improving IVF embryo implantation, the method comprising contacting an embryo generated via IVF ~~embryo~~—with an effective amount of ~~heparanase~~mammalian heparanase and implanting the embryo in a receptive uterus.

Claim 22. (Currently amended) The method of claim 21, wherein said ~~heparanase~~mammalian heparanase is a mature heparanase.

Claim 23. (Currently amended) The method of claim 21, wherein said ~~heparanase~~mammalian heparanase is a pro-heparanase, cleavable into mature heparanase.

Claim 24. (Currently amended) The method of claim 21, wherein contacting the embryo generated via IVF ~~embryo~~ with an effective amount of ~~heparanase~~mammalian heparanase is in vitro.

Claim 25. (Currently amended) The method of claim 21, wherein contacting the embryo generated via IVF ~~embryo~~ with an effective amount of ~~heparanase~~mammalian heparanase is in utero.

Claim 26. (Currently amended) A method of improving IVF embryo implantation, the method comprising contacting a receptive uterus with an effective amount of ~~heparanase~~mammalian heparanase and implanting the embryo generated via IVF embryo in the receptive uterus.

Claim 27. (Currently amended) The method of claim 26, wherein said ~~heparanase~~mammalian heparanase is a mature heparanase.

Claim 28. (Currently amended) The method of claim 26, wherein said ~~heparanase~~mammalian heparanase is a pro-heparanase, cleavable into mature heparanase.

Claim 29. (Currently amended) The method of claim 26, wherein contacting the receptive uterus with the effective amount of ~~heparanase~~mammalian heparanase precedes implanting the embryo generated via IVF-embryo in the receptive uterus.

Claim 30. (Currently amended) The method of claim 26, wherein contacting the receptive uterus with the effective amount of ~~heparanase~~mammalian heparanase is concurrent to implanting the embryo generated via IVF embryo in the receptive uterus.

Claim 31. (Currently amended) A method of improving IVF embryo implantation, the method comprising contacting a receptive uterus with an effective amount of ~~heparanase~~mammalian heparanase, contacting an embryo generated via IVF-embryo with an effective amount of ~~heparanase~~mammalian heparanase and implanting the embryo generated via IVF-embryo in the receptive uterus.

Claim 32. (Currently amended) The method of claim 31, wherein said ~~heparanase~~mammalian heparanase is a mature heparanase.

Claim 33. (Currently amended) The method of claim 31, wherein said

~~heparanase~~mammalian heparanase is a pro-heparanase, cleavable into mature heparanase.

Claim 34. (Currently amended) The method of claim 31, wherein contacting the embryo generated via IVF~~embryo~~ with an effective amount of ~~heparanase~~mammalian heparanase is in vitro.

Claim 35. (Currently amended) The method of claim 31, wherein contacting the embryo generated via IVF~~embryo~~ with an effective amount of ~~heparanase~~mammalian heparanase is in utero.

Claim 36. (Currently amended) The method of claim 31, wherein contacting the receptive uterus with the effective amount of ~~heparanase~~mammalian heparanase precedes implanting the embryo generated via IVF~~embryo~~ in the receptive uterus.

Claim 37. (Currently amended) The method of claim 31, wherein contacting the receptive uterus with the effective amount of ~~heparanase~~mammalian heparanase is concurrent to implanting the embryo generated via IVF~~embryo~~ in the receptive uterus.